

I CLAIM:

1. An MPEG-2 encoding method comprising:
receiving input data containing image information;
generating encoded data based on a frequency domain transform of the input data;
determining whether an encoded reference is available for use;
generating residue data representing the difference between the encoded data and the encoded reference when the encoded reference is available; and
storing the encoded data as an encoded reference when no encoded reference is available.
2. The method of claim 1, further comprising:
selecting one of the encoded data and the residue data for incorporation in output data; and
when the encoded data is selected, storing the encoded data as the encoded reference.
3. The method of claim 2, wherein selecting one of the encoded data and the residue data comprises selecting the smaller of the encoded data and the residue data.
4. The method of claim 2, further comprising generating packed codes from the selected data and supplying the packed codes as output data.

5. The method of claim 4, comprising supplying the packed codes as the output data in an MPEG format.

6. The method of claim 1, wherein the frequency domain transform comprises a discrete cosine transform.

7. A system comprising:

a processor configured to:

receive input data containing image information,
generate encoded data based on a frequency domain transform of the
input data, and
selectively generate an encoded reference based on a frequency
domain transform of the input data; and

a memory device coupled to the processor;

wherein the processor is further configured to:

store the generated encoded reference in the memory device when no
encoded reference is available in the memory device, and
generate residue data representing the difference between the encoded
data and the stored encoded reference when the encoded
reference is available in the memory device.

8. The system of claim 7, wherein the processor is configured to:

select one of the encoded data and the residue data for incorporation into output data; and

store the encoded data as the encoded reference in the memory device when the encoded data is selected.

9. The system of claim 8, wherein the processor is configured to select the smaller of the encoded data and the residue data as the output data.

10. The system of claim 8, wherein the processor is configured to generate packed codes from the selected data.

11. The system of claim 10, wherein the processor is configured to generate the packed codes in an MPEG format.

12. The system of claim 7, wherein the frequency domain transform comprises a discrete cosine transform.

13. The system of claim 7, wherein the processor is configured to receive the input data in the form of I, P, or B frames; and generate an encoded reference based on a frequency domain transform of the input data only when the received input data is in the form of an I or P frame.

14. The system of claim 13, wherein the processor is configured to generate quantized data from the encoded data.

15. The system of claim 14, wherein the processor is configured to generate the quantized data consistent with the MPEG-2 format.

16. A computer-readable medium containing instructions for a computer to encode image information, the computer-readable medium instructing the computer to:

- receive input data containing image information;
- generate encoded data based on a frequency domain transform of the input data;
- determine whether an encoded reference is available for use;
- generate residue data representing the difference between the encoded data and the encoded reference when the encoded reference is available; and
- store the encoded data as an encoded reference when no encoded reference is available.

17. The computer-readable medium of claim 16, wherein the computer-readable medium further instructs the computer to:

- select one of the encoded data and the residue data for incorporation in output data; and
- store the encoded data as the encoded reference when the encoded data is selected.

18. The computer-readable medium of claim 17, wherein selecting one of the encoded data and the residue data comprises selecting the smaller of the encoded data and the residue data.

19. The computer-readable medium of claim 17, wherein the computer-readable medium further instructs the computer to generate packed codes from the selected data and supply the packed codes as output data.

20. The computer-readable medium of claim 19, wherein the computer-readable medium further instructs the computer to supply the packed codes in an MPEG format.

21. The computer-readable medium of claim 16, wherein the frequency domain transform comprises a discrete cosine transform.

22. The computer-readable medium of claim 16, wherein the computer comprises a processor and a memory device coupled with the processor.